Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1. (Original) A method for supporting mobility of a mobile node in a network system including a home agent for managing an address of the mobile node and a plurality of access routers, the method comprising the steps of:

(a) acquiring by the mobile node a care-of address (CoA) from a first access router when the mobile node is located in the first access router;

(b) determining by the mobile node whether the first access router provides a regional anchor point (RAP) function; and

(c) transmitting a CoA assigned from a second access router to the first access router by the mobile node that has moved from the first access router to the second access router, when the first access router has a RAP function.

Claim 2. (Original) The method of claim 1, wherein the step (b) comprises the step of determining whether the second access router is located within a predetermined distance from the first access router.

Claim 3. (Original) The method of claim 1, wherein step (a) comprises the steps of:
acquiring a CoA assigned from the first access router; and
transmitting a binding update having a home address and the CoA assigned from the first access router to the home agent.

Claim 4. (Original) The method of claim 1, further comprising the step of, upon receiving the CoA assigned from the second access router, binding by the first access router the received CoA from the second access router with an address of the first access router.

Claim 5. (Original) The method of claim 4, wherein the CoA assigned from the first access router and the CoA assigned from the second access router are designated as an RAP address and a final CoA, respectively, and then registered in the RAP.

Claim 6. (Original) The method of claim 5, wherein the RAP intercepts packet data being transmitted with the mobile node designated as a destination, and tunnels the packet data to the final CoA of the mobile node.

Claim 7. (Original) The method of claim 3, further comprising the step of receiving by the mobile node a binding acknowledgement indicating success in binding update.

Claim 8. (Original) The method of claim 1, further comprising the step of transmitting the CoA assigned from the second access router to the home agent by the mobile node, if the first access router does not provide a RAP function.

Claim 9. (Original) The method of claim 1, further comprising the step of transmitting the CoA assigned from the first access router to a corresponding node, if the mobile node is located in the first access router.

Claim 10. (Original) A method for maintaining data transmitted from a corresponding node when a mobile node moves from a home network to an external network in a network system including a home agent for managing an address of the mobile node and a plurality of access routers to which the mobile node can move, the method comprising the steps of:
acquiring a care-of address (CoA) assigned from the first access router when the mobile node first has moved from the home network to the external network;
determining whether the first access router has a regional anchor point (RAP) function; and
designating the first access router as a first RAP and transmitting a binding update having the CoA assigned from the first access router and a home address to the home agent, if the first access router has a RAP function.

Claim 11. (Original) The method of claim 10, further comprising the step of designating the first RAP as a null and transmitting a binding update having the CoA assigned from the first access router to the home agent, if the first access router does not have a RAP function.

Claim 12. (Currently Amended) An apparatus for supporting mobility of a mobile node moved from a second access router to a first access router in a network system including a home agent for managing an address of a mobile node and a plurality of access routers to which the mobile node can move, the apparatus comprising:

a first access router for assigning a first care-of address (CoA) to the mobile node;

a mobile node for determining whether a second access router has a ~~RAP~~ regional anchor point (RAP) function and transmits a binding message including the first CoA to the second access router if the second access router has a RAP function; and

a second router for assigning a second CoA to a mobile station and binding the first CoA from the mobile node with the assigned second CoA upon receiving a binding message from the mobile node.

Claim 13. (Original) The apparatus of claim 12, further comprising a home network that binds, upon receiving a binding message from the mobile node, a CoA included in the received binding message with a home address, and upon receiving packet data from a corresponding node, transmits the received packet data to the bound address designated as a destination address.

Claim 14. (Original) The apparatus of claim 12, wherein the mobile node determines whether the second access router is located within a predetermined distance from the first access router in order to determine whether the second has a RAP function.